Electronic Version
Stylesheet Version v1.1.1

LOW-VOLTAGE CURVATURE-COMPENSATED BANDGAP REFERENCE

Abstract

A subtractor is connected between a p-channel bandgap reference unit and an n-channel bandgap reference unit. The subtractor includes two NPN transistors connected to the p-channel bandgap reference unit, and two PNP transistors connected to the n-channel bandgap reference unit. The subtractor takes the difference of the two currents produced by the p-channel and n-channel bandgap reference units and generates a temperature insensitive and curvature-compensated reference voltage of less than one volt across an output resistor.